

Appl. No.: 09/941,403

Amdt. dated: 10/10/2005

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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A mixer topology configured to reduce predetermined spurious output signals, the mixer topology comprising:

an input coupler having an input port for receiving a first signal having a frequency f_1 and two output ports, said input port configured with predetermined phase shifts between said input port and said two output ports;

a local oscillator (LO) coupler having an input port for receiving a local oscillator signal having a frequency f_2 and two output ports, said LO coupler configured with predetermined phase shifts between said input port and said two output ports, ;

an intermediate frequency (IF) coupler with two input ports and output port, said IF coupler configured with predetermined phase shifts between said two input ports and said output port;

a first mixer having two input ports and an output port, said input ports of said first mixer each electronically coupled to one of said two input ports of said input coupler and one of said output ports of said LO coupler, said output port of said first mixer electrically coupled to one of said two input ports of said IF coupler; and

a second mixer having two input ports and an output port, said input ports of said second mixer each electrically coupled to the other of said two input ports of said input coupler and the other output port of said LO coupler, said output port of said second mixer electrically coupled to the other of said two input ports of said IF coupler, wherein said input coupler, LO coupler and IF coupler and said first and second mixers are configured to cancel ~~the and~~ one or more output signals of said first and second mixers other than ~~preselected spurs other than the (1,1) spur~~ f_1 and f_2 .

2. (Original). The mixer topology as recited in claim 1, wherein said predetermined phase shifts of said input coupler include a 180° phase shift.

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3. (Original). The mixer topology as recited in claim 1, wherein said predetermined phase shifts of said LO coupler include a 180° phase shift.

4. (Original). The mixer topology as recited in claim 1, wherein said predetermined phase shifts of said IF coupler include a 180° phase shift.

5. (Original). The mixer topology as recited in claim 1, wherein said one or more other preselected spurs include the (2, 0) spur.

6. (Original). The mixer topology as recited in claim 1, wherein said one or more other preselected spurs include the (0, 2) spur.

7. (Original). The mixer topology as recited in claim 1, wherein said one or more other preselected spurs include the (2, 1) spur.

8. (Original). The mixer topology as recited in claim 1, wherein said one or more other preselected spurs include the (2, 2) spur.

9. (Original). The mixer topology as recited in claim 1, wherein said one or more other preselected spurs include the (1, 2) spur.

10. (Original). The mixer topology as recited in claim 1, wherein said one or more other preselected spurs include the (1, 3) spur.

11-24 (Canceled).